



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending April 16, 2016 - Week 15

All data presented in this report are provisional and may change as additional reports are received



Quick Stats

Percent of outpatient visits for ILI ¹	0.64% (baseline 1.7%)
Percent of influenza rapid test positive	17.4 % (183/1050)
Percent of RSV rapid tests positive	11.9% (17/143)
Percent school absence due to illness ²	1.96%
Number of schools with ≥10% absence due to illness	1
Influenza-associated hospitalizations ³	11/5,220 inpatients surveyed
Influenza-associated mortality -all ages (Cumulative) ⁴	37
Influenza-associated pediatric mortality (Cumulative)	0

¹ ILI: Influenza-like Illness is defined as a fever of ≥100° F as well as cough and/or sore throat.

² Percent school absence due to illness are reported through a weekly survey of Iowa sentinel schools

³ Hospitalizations due to influenza are voluntarily reported through a weekly survey of Iowa sentinel hospitals

⁴ Deaths in which influenza is listed on the death certificate. This is an underestimate of influenza-related deaths. Cumulative is 10/4/2015-current week.

Iowa Influenza Geographic Spread⁵

No Activity
Sporadic
Local
Regional
Widespread

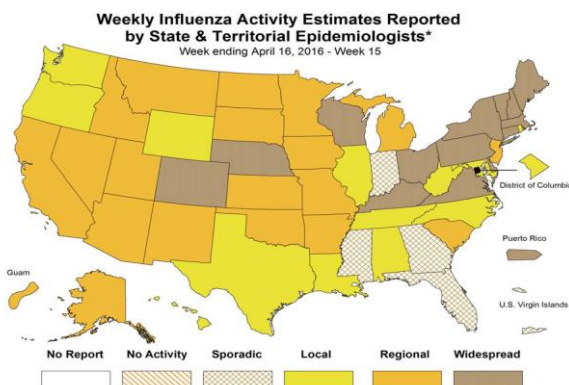
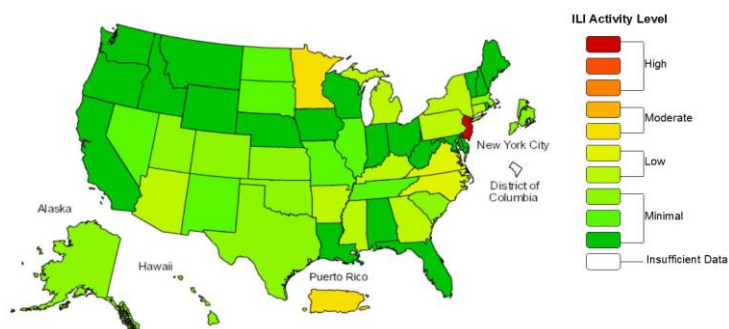
⁵This is based on CDC's activity estimates definition
www.cdc.gov/flu/weekly/overview.htm

Iowa statewide activity summary:

The geographic spread of influenza in Iowa is now regional. For this reporting week, the State Hygienic Laboratory (SHL) confirmed eight cases of influenza A and one case of influenza B. Eleven influenza-related hospitalizations were reported from sentinel hospitals. The proportion of outpatient visits due to influenza-like illness (ILI) was 0.64 percent, which is below the regional baseline. One school reported 10 percent or greater absenteeism due to illness which included influenza-like symptoms. In this reporting week, 16 adenovirus, one parainfluenza virus type 1, one parainfluenza virus type 3, 60 rhinovirus/ enterovirus, 11 RSV, and 11 hMPV were detected from surveillance sites.

National activity summary - (CDC):

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2015-16 Influenza Season Week 15 ending Apr 16, 2016



Synopsis: During week 15 (April 10-16, 2016), influenza activity decreased in the United States.

Viral Surveillance: The most frequently identified influenza virus type reported by public health laboratories during week 15 was influenza A, with influenza A (H1N1)pdm09 viruses predominating. The percentage of respiratory specimens testing positive for influenza in clinical laboratories decreased.

Pneumonia and Influenza Mortality: The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the NCHS Mortality Surveillance System and above the system-specific epidemic threshold in the 122 Cities Mortality Reporting System.

Influenza-associated Pediatric Deaths: Six influenza-associated pediatric deaths were reported.

Influenza-associated Hospitalizations: A cumulative rate for the season of 28.4 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported.

Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 2.1 percent, which is at the national baseline of 2.1 percent. Five of 10 regions reported ILI at or above region-specific baseline levels. One state experienced high ILI activity; Puerto Rico and one state experienced moderate ILI activity; 11 states experienced low ILI activity; New York City and 37 states experienced minimal ILI activity; and the District of Columbia had insufficient data.

Geographic Spread of Influenza: The geographic spread of influenza in Puerto Rico and 14 states was reported as widespread; Guam and 19 states reported regional activity; the District of Columbia and 13 states reported local activity; and the U.S. Virgin Islands and four states reported sporadic activity.

Detailed information can be found online at www.cdc.gov/flu/weekly/.

International activity summary - (WHO):

In the Northern Hemisphere influenza activity was decreasing, while still elevated in some areas, due in part to an increase of influenza B activity. In the Southern Hemisphere influenza activity was reported to be slightly increasing. Detailed information can be found online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/. It was last updated 04/18/2016.

Laboratory surveillance program:

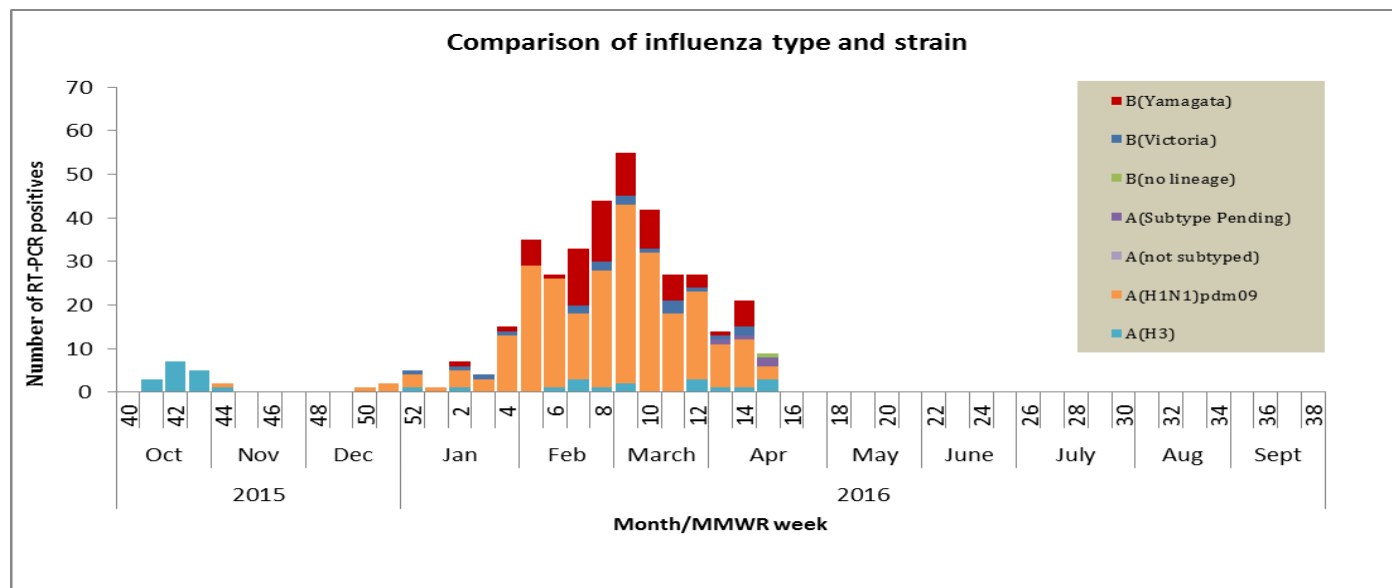
The State Hygienic Laboratory (SHL) is the primary lab for influenza testing and reporting in Iowa. SHL reports the number of tests performed and the type and sub-type of positive tests to the influenza surveillance network several times every week. In addition, SHL surveys clinical and reference labs on a weekly basis for the number of rapid-antigen tests performed, the number positive and the positive non-influenza virus tests.

	CURRENT WEEK				CUMULATIVE (10/4/15 – CURRENT WEEK)			
Age Group	Flu A				Flu A			
	A(H1N1)pdm09	A(H3)	Subtype Pending	Not subtyped	A(H1N1)pdm09	A(H3)	Subtype Pending	Not subtyped
0-4	0(0%)	0(0%)	0(0%)	0(0%)	35(14%)	0(0%)	0(0%)	0(0%)
5-17	0(0%)	0(0%)	0(0%)	0(0%)	43(17%)	2(6%)	0(0%)	1(17%)
18-24	0(0%)	1(33%)	1(50%)	0(0%)	34(13%)	9(27%)	2(50%)	1(17%)
25-49	1(33%)	0(0%)	0(0%)	0(0%)	75(29%)	4(12%)	0(0%)	1(17%)
50-64	2(66%)	1(33%)	1(50%)	0(0%)	47(18%)	9(27%)	2(50%)	3(50%)
>64	0(0%)	1(33%)	0(0%)	0(0%)	25(10%)	9(27%)	0(0%)	0(0%)
Total	3	3	2	0	259	33	4	6

*Counts of three or less are sometimes suppressed to protect confidentiality. Note that counts may not add up to the total due to missing age information
Only cases of Iowa residents are included
"Not subtyped" column is due to weak detections. This can be due to poor collection, timing of collection or stage of infection.

	CURRENT WEEK			CUMULATIVE (10/4/15 – CURRENT WEEK)		
Age Group	Flu B			Flu B		
	Victoria Lineage	Yamagata Lineage	Lineage Pending	Victoria Lineage	Yamagata Lineage	Lineage Pending
0-4	0(0%)	0(0%)	0(0%)	4(22%)	7(10%)	0(0%)
5-17	0(0%)	0(0%)	1(100%)	7(39%)	20(28%)	1(100%)
18-24	0(0%)	0(0%)	0(0%)	2(11%)	1(1%)	0(0%)
25-49	0(0%)	0(0%)	0(0%)	2(11%)	16(23%)	0(0%)
50-64	0(0%)	0(0%)	0(0%)	1(6%)	12(17%)	0(0%)
>64	0(0%)	0(0%)	0(0%)	2(11%)	15(21%)	0(0%)
Total	0	0	1	18	71	1

*Counts of three or less are sometimes suppressed to protect confidentiality. Note that counts may not add up to the total due to missing age information
Only cases of Iowa residents are included



Rapid influenza and RSV test surveillance:

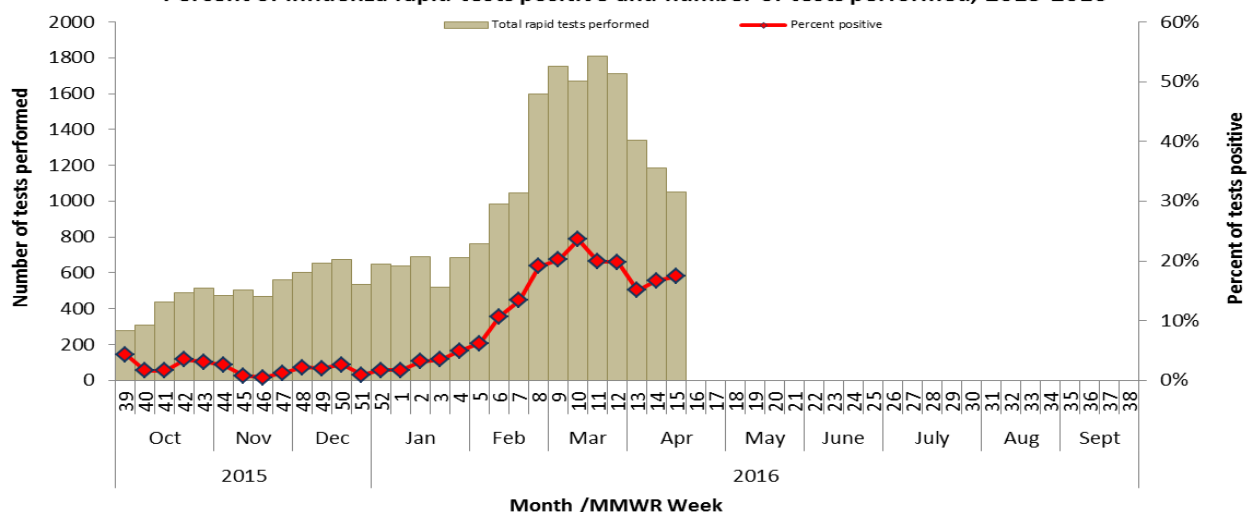
The State Hygienic Laboratory (SHL) runs a weekly web-based survey program where laboratorians report the number of influenza and respiratory syncytial virus (RSV) rapid tests performed and the number of tests positive. This table includes only the number of patients tested for influenza or RSV at laboratory surveillance sites throughout the state. This table does not provide case counts.

Table 2: Percent of influenza rapid tests positive and number of tests performed by region for the present week

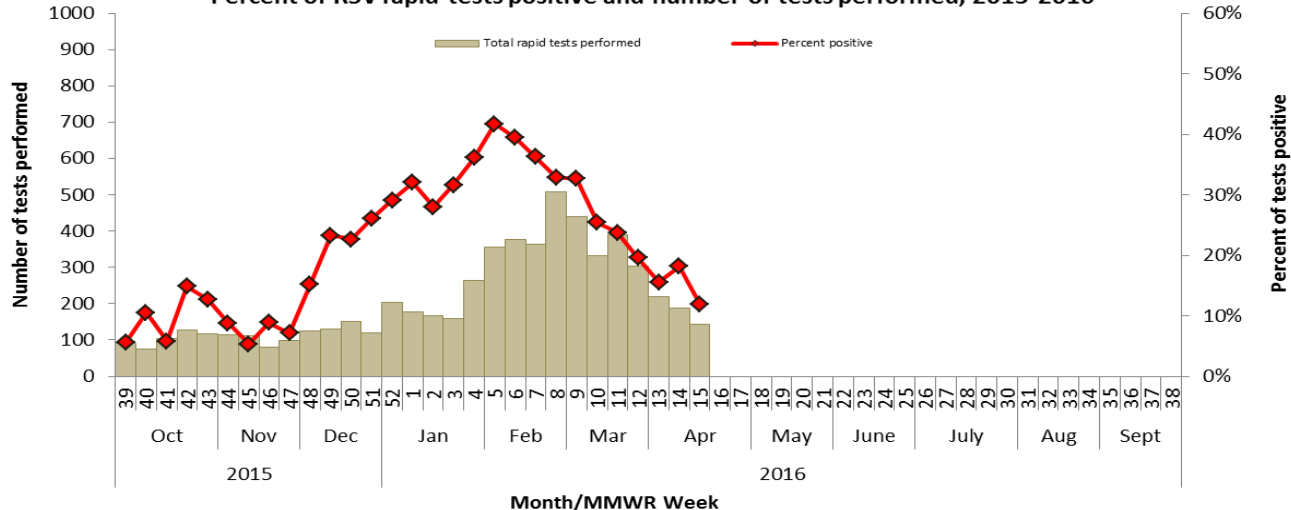
REGION*	RAPID ANTIGEN INFLUENZA TESTS				RAPID ANTIGEN RSV TESTS		
	Tested	Flu A	Flu B	% Positive	Tested	Positive	% Positive
Region 1 (Central)	137	29	8	27.0	18	4	22.2
Region 2 (NE)	43	4	0	9.3	8	4	50.0
Region 3 (NW)	103	12	5	16.5	15	1	6.7
Region 4 (SW)	86	14	1	17.4	9	0	0.0
Region 5 (SE)	120	14	0	11.7	8	0	0.0
Region 6 (Eastern)	561	72	24	17.1	85	8	9.4
Total	1050	145	38	17.4	143	17	11.9

*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; Region 2- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright; Region 3- Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury; Region 4- Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union; Region 5- Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne; Region 6- Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jackson, Johnson, Jones, Linn, Scott.

Percent of influenza rapid tests positive and number of tests performed, 2015-2016



Percent of RSV rapid tests positive and number of tests performed, 2015-2016



Non-influenza respiratory viruses:

The State Hygienic Laboratory (SHL) runs a weekly web-based survey program where laboratorians report the number of positive tests for non-influenza respiratory viruses. The table includes only the number of positive tests at laboratory surveillance sites throughout the state. The table does not provide case counts.

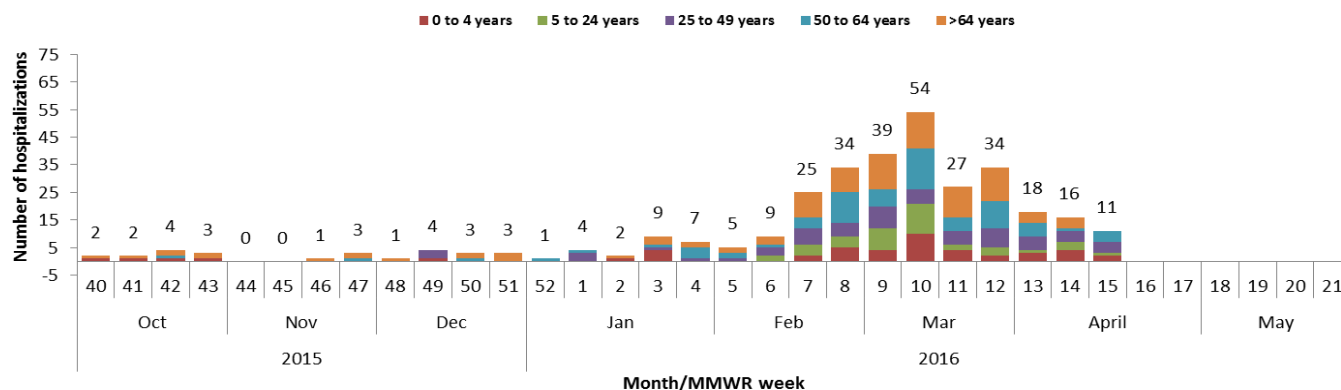
Viruses	CURRENT WEEK	CUMULATIVE (10/4/15 – CURRENT WEEK)
Adenovirus	16	377
Parainfluenza Virus Type 1	1	167
Parainfluenza Virus Type 2	0	4
Parainfluenza Virus Type 3	1	7
Parainfluenza Virus Type 4	0	68
Rhinovirus/Enterovirus	60	984
Respiratory syncytial virus (RSV)	11	685
Human metapneumovirus (hMPV)	11	328
Total	100	2620

Influenza-associated hospitalizations:

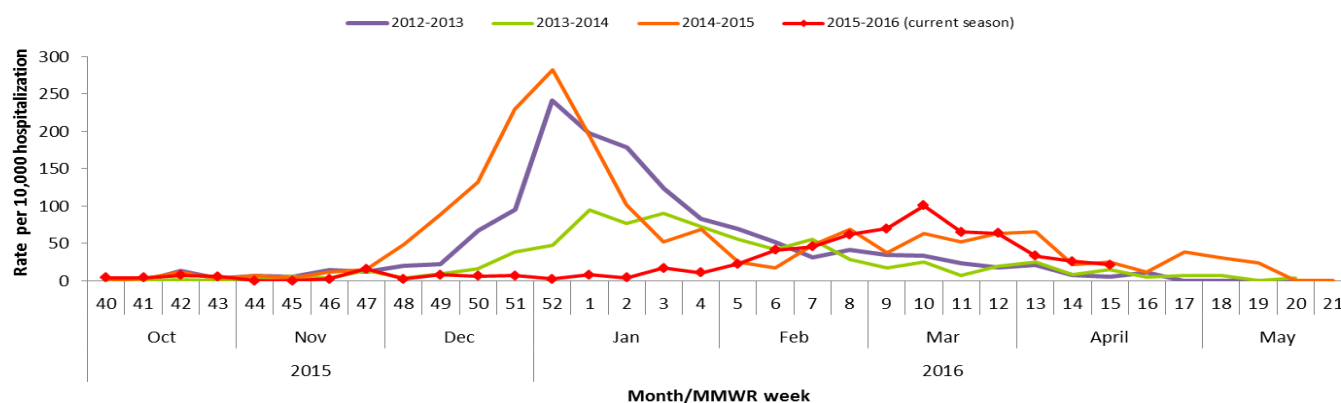
Sentinel hospitals that participate in IISN voluntarily track and report the number of influenza-associated hospitalizations and the total number of inpatients each week.

AGE	CURRENT WEEK	CUMULATIVE (10/4/15 – CURRENT WEEK)
Age 0-4	2	46
Age 5-24	1	39
Age 25-49	4	61
Age 50-64	4	74
Age >64	0	101
Total	11	321

Influenza-associated hospitalizations by age groups, 2015-2016



Influenza-associated hospitalizations reported by hospital surveillance sites



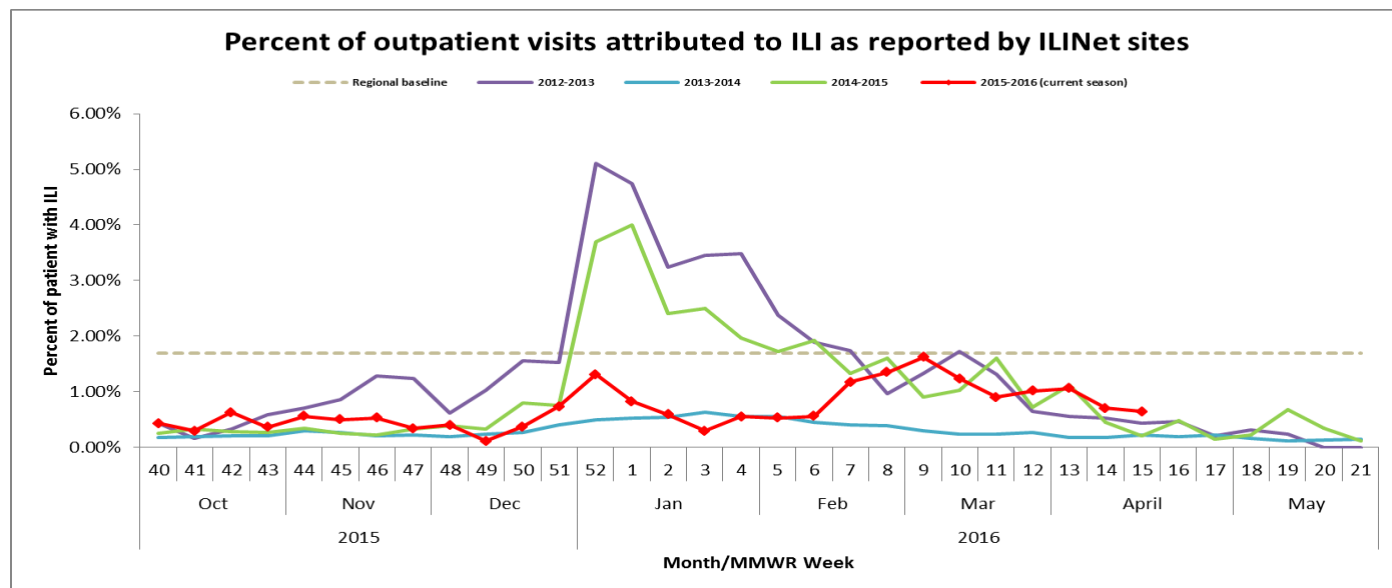
Outpatient health care provider surveillance program (ILINet):

Outpatient health care providers who participate in the ILINet (a national influenza surveillance program) report the number of patients seen with influenza-like illness and the total number of patient visits each week. This system is a key part of Iowa's influenza surveillance. Iowa health care providers interested in joining this surveillance program should contact Julie Coughlin at 515-281-7134 or

julie.coughlin@idph.iowa.gov for more information.

Table 6: Outpatient visits for influenza-like illness (ILI)

Week	%ILI	Total ILI	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age >64
Week 15, ending April 16	0.64	8	1	3	2	1	1
Week 14, ending April 9	0.70	6	2	1	1	1	1
Week 13, ending April 2	1.06	20	5	10	1	2	2



Long-term Care Outbreaks:

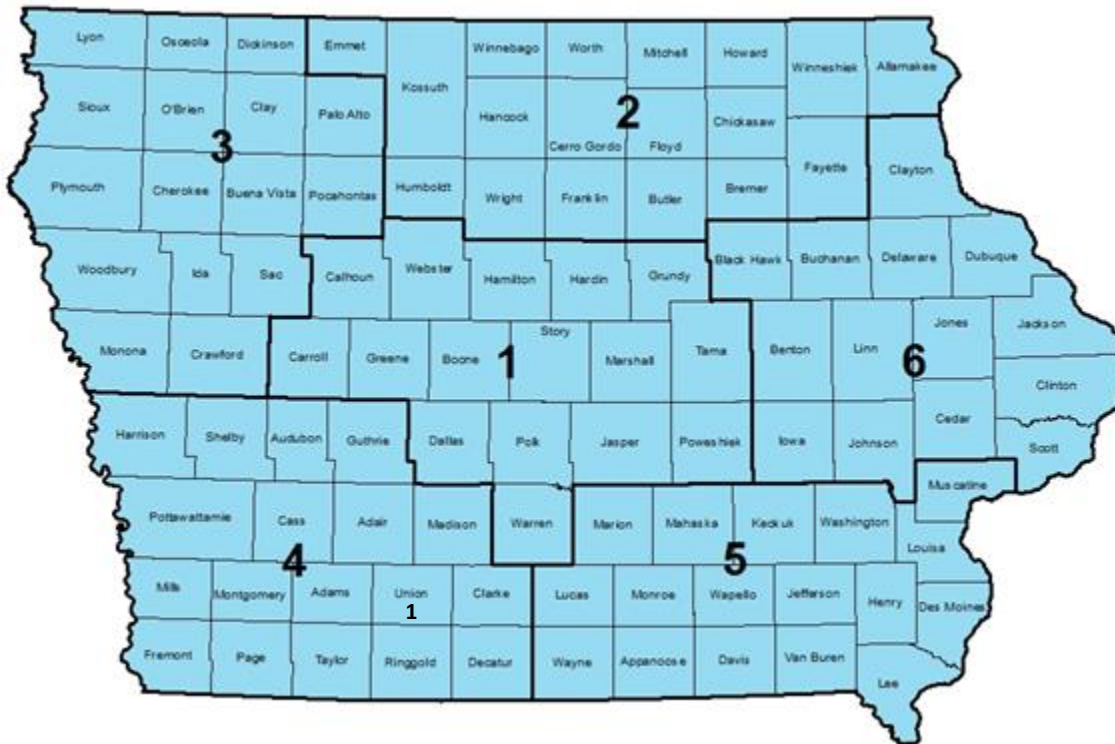
Table 7: Number of long-term care outbreaks investigated

REGION*	CURRENT WEEK	CUMULATIVE (10/4/15 – CURRENT WEEK)
Region 1 (Central)	0	2
Region 2 (NE)	0	0
Region 3 (NW)	0	0
Region 4 (SW)	0	2
Region 5 (SE)	0	2
Region 6 (Eastern)	0	1
Total	0	7

*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; Region 2- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright; Region 3- Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury; Region 4- Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union; Region 5- Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne; Region 6- Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jackson, Johnson, Jones, Linn, Scott.

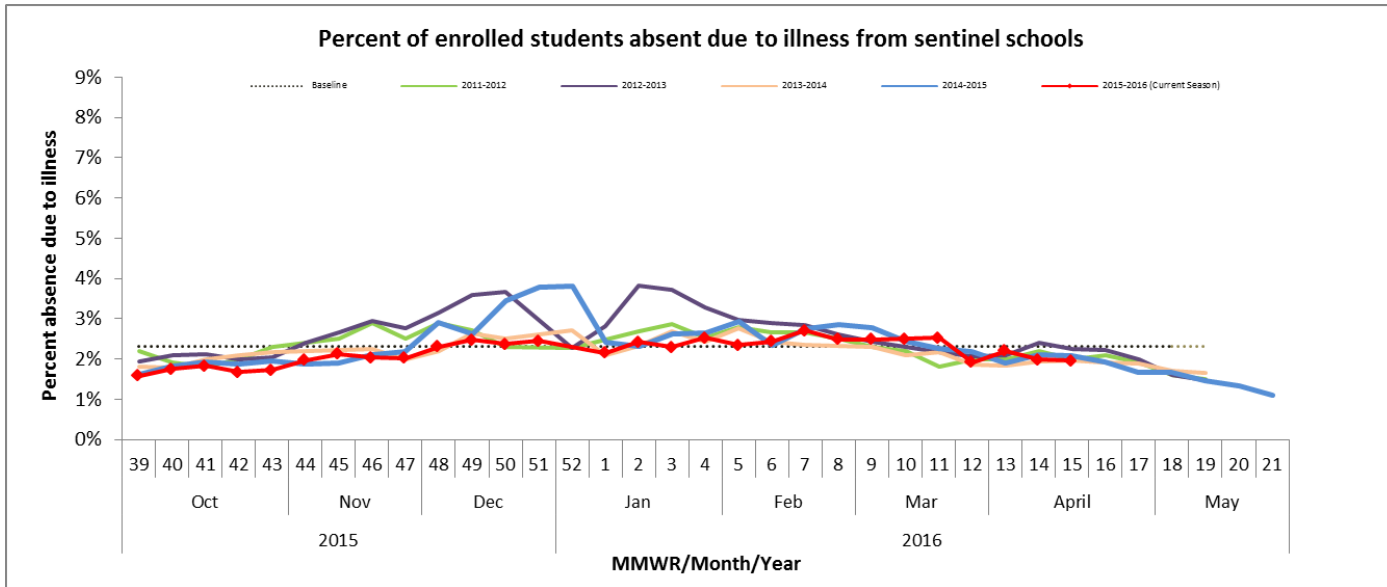
10 percent school absenteeism:

Schools (K-12) track and report when the number of students absent with illness reaches or exceeds 10 percent of total student enrollment. A regional map with schools that have $\geq 10\%$ absence due to illness, which includes influenza-like illness, for the current reporting week is displayed below.



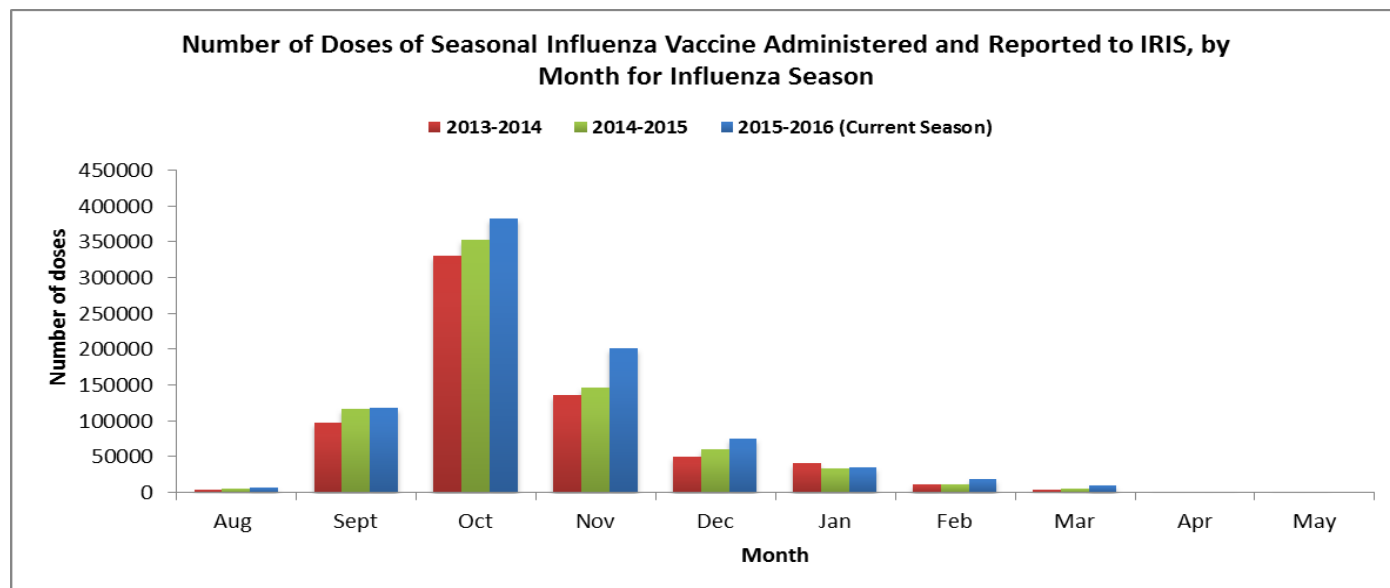
School surveillance program:

Sentinel schools that participate in IISN voluntarily track and report absence due to all illness (including non-influenza illnesses) and the total enrollment each week.



Seasonal influenza vaccination:

Seasonal influenza vaccination data in Iowa is based on doses reported to the Iowa Immunization Registry Information System (IRIS). IRIS is a confidential, computerized, population-based system that tracks immunization for children, adolescents and adults who are seen in a variety of public and private healthcare provider sites throughout the state of Iowa. For more information on the immunization data, contact Kim Tichy, IRIS coordinator at 515-281-4288 or kimberly.tichy@idph.iowa.gov.



Note: The data for the 2015-2016 season is only up to the current week and there is a lag between the vaccine administration date and the date reported to the IRIS. The current season's data will be adjusted as additional data is received.

Other resources:

Vaccine:

Influenza vaccine recommendation: <http://idph.iowa.gov/immmtb/immunization/vaccine>

CDC vaccine information: www.cdc.gov/flu/fag/flu-vaccine-types.htm

Vaccine finder: <http://vaccinefinder.org/>

Neighboring states' influenza information:

Illinois: www.dph.illinois.gov/topics-services/diseases-and-conditions/influenza/surveillance

Minnesota: www.health.state.mn.us/divs/idepc/diseases/flu/stats/index.html

Missouri: <http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>

South Dakota: <http://doh.sd.gov/diseases/infectious/flu/>

Wisconsin: www.dhs.wisconsin.gov/influenza/index.htm